

AMENDMENTS TO THE DRAWINGS

The attached sheets of drawings include changes to Fig. 1-5. These sheets 1/25, 2/25, 3/25, 4/25 and 5/25, which include Figs.1-5 , replace the original sheets including Figs. 1-5.

REMARKS/ARGUMENTS

Claims 1-10 stand rejected in the outstanding Official Action. Claims 1, 2, 5 and 7 have been amended and therefore claims 1-7 remain in the application.

The Examiner's indication of PTO acceptance of the originally filed drawings is very much appreciated. Additionally, the Examiner's acknowledgment of Applicants' claim for priority and receipt of all of the priority documents is very much appreciated. Finally, the Examiner's consideration of Applicants' previously filed Information Disclosure Statement is appreciated.

Claims 1, 2 and 4-8 stand rejected under 35 USC §102 as being anticipated by Lillington (U.S. Publication 2001/0022811). Applicants' independent claim 1 has been amended to correct the requirement that the "at least one complex frequency shifting converter" is not a tuned converter, but rather is configured so as to act as a tuneable converter. As discussed in Applicants' specification, the configuration of the at least one complex frequency shifting converter can be achieved in a number of different ways, including the use of different coefficients and/or different interleaving.

In order to anticipate Applicants' independent claim 1, it is necessary that the cited prior art reference disclose "at least one complex frequency shifting converter, in at least one of said plurality of frequency separating stages, is configured **to act as a tuneable complex frequency shifting converter** having a frequency shifting characteristic for outputting a frequency shifted complex output signal representing a portion of said input bandwidth centered **other than at $-F_s/4$ or $+F_s/4$** " (Claim 1, emphasis added). The frequency converters in Lillington are not tuneable nor is the bandwidth centered "other than at $-F_s/4$ or $+F_s/4$ ".

Unfortunately, claim 1 has only recently been amended to change the language from “tuned” to “tuneable” and, thus far, the Examiner identifies no converter in the Lillington reference that is tuneable or configured to be tuneable. Thus this aspect of claim 1 is missing from the prior art.

It is noted that Figure 2 in Lillington illustrates that the output signal in filter bank A output represents a portion of the input bandwidth centered at $-F_s/4$. Thus, the requirement of the claim that a portion of the bandwidth be centered “other than at $-F_s/4$ or $+F_s/4$ ” is not met. The Lillington converter, as in the prior art converters noted in Applicants’ specification, are always centered at $-F_s/4$ or $+F_s/4$. Thus, Lillington fails to disclose all structures recited in Applicants’ independent claim 1 or claims dependent thereon.

As a result of the above, Lillington clearly fails to disclose the subject matter of independent claim 1 and claims dependent thereon and any further rejection under 35 USC §102 is respectfully traversed.

In addition, Lillington’s actually teaching a fixed frequency converter would lead one of ordinary skill away from the claimed invention. Similarly, Lillington’s teaching of bandwidth centered at $-F_s/4$ or $+F_s/4$ would lead one of ordinary skill in the art away from the claim requirement that there be a portion of the bandwidth “centred other than at $-F_s/4$ or $+F_s/4$.”

As a result, Lillington clearly would lead those of ordinary skill in the art away from the subject matter of independent claim 1 and claims dependent thereon and any future rejection under 35 USC §103 is respectfully traversed.

In section 4 on page 5 of the Official Action, the Examiner alleges that claim 3 is unpatentable under 35 USC §103 over Lillington in view of Garceran (U.S. Patent 6,944,238).

The above comments distinguishing claim 1, from which claim 3 depends, from the Lillington reference are herein incorporated by reference.

As noted above, Lillington fails to teach and indeed would lead one away from configuring converters so as to “act as a tuneable complex frequency shifting converter” and certainly teaches away from a portion of said input bandwidth centered other than at $-F_s/4$ or $+F_s/4$. Thus, Lillington would lead one of ordinary skill in the art away from the claim 3 combination as contended by the Examiner.

There is no allegation by the Examiner that the Garceran reference contains any disclosure of either configuring a converter to “act as a tuneable complex frequency shifting converter” or that there be a “portion of said input bandwidth centred other than at $-F_s/4$ or $+F_s/4$.” As a result, even if Lillington and Garceran were combined, they would not render obvious Applicants’ claimed subject matter.

In section 5 on page 6 of the Official Action, the Examiner alleges that claim 10 is unpatentable under 35 USC §103 over Lillington in view of Carr (U.S. Patent 7,236,212). The above comments distinguishing claim 1, from which claim 10 depends, from the Lillington reference are herein incorporated by reference.

As noted above, Lillington fails to teach and indeed would lead one away from configuring converters so as to “act as a tuneable complex frequency shifting converter” and certainly teaches away from a portion of said input bandwidth centered other than at $-F_s/4$ or $+F_s/4$. Thus, Lillington would lead one of ordinary skill in the art away from the claim 3 combination as contended by the Examiner.

There is no allegation by the Examiner that the Carr reference contains any disclosure of either configuring a converter to “act as a tuneable complex frequency shifting converter” or that there be a “portion of said input bandwidth centred other than at $-F_s/4$ or $+F_s/4$.” As a result, even if Lillington and Carr were combined, they would not render obvious Applicants’ claimed subject matter.

In section 6 on page 7 of the Official Action, the Examiner alleges that claim 9 is unpatentable under 35 USC §103 over Lillington in view of Garceran and further in view of Carr. The above comments distinguishing claim 1, from which claim 9 depends, from the Lillington reference are herein incorporated by reference.

As noted above, Lillington fails to teach and indeed would lead one away from configuring converters so as to “act as a tuneable complex frequency shifting converter” and certainly teaches away from a portion of said input bandwidth centered other than at $-F_s/4$ or $+F_s/4$. Thus, Lillington would lead one of ordinary skill in the art away from the claim 9 combination as contended by the Examiner.

There is no allegation by the Examiner that the Garceran or Carr reference contain any disclosure of either configuring a converter to “act as a tuneable complex frequency shifting converter” or that there be a “portion of said input bandwidth centred other than at $-F_s/4$ or $+F_s/4$.” As a result, even if Lillington, Garceran and Carr were combined, they would not render obvious Applicants’ claimed subject matter.

It is possible that some of the Examiner’s confusion regarding the Lillington reference has occurred because Applicants’ originally filed application did not label Figures 1-5 or the brief description of Figures 1-5 to indicate that this is known prior art. Applicants have amended

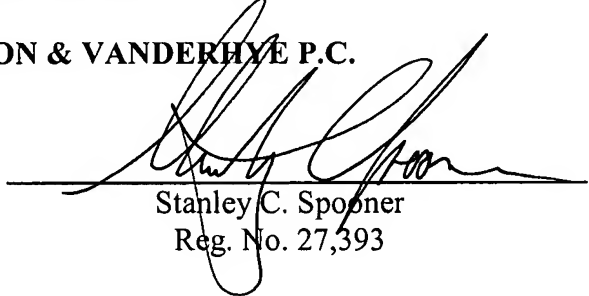
the specification and submits herewith substitute drawings with the appropriate notations that the figures are prior art. Consideration and entry of these amendments and substitute drawings is respectfully requested.

Having responded to all objections and rejections set forth in the outstanding Official Action, it is submitted that claims 1-10 are in condition for allowance and notice to that effect is respectfully requested. In the event the Examiner is of the opinion that a brief telephone or personal interview will facilitate allowance of one or more of the above claims, he is respectfully requested to contact Applicants' undersigned representative.

Respectfully submitted,

NIXON & VANDERHYTE P.C.

By: _____


Stanley C. Spooner
Reg. No. 27,393

SCS:kmm
901 North Glebe Road, 11th Floor
Arlington, VA 22203-1808
Telephone: (703) 816-4000
Facsimile: (703) 816-4100